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IS 3555 (1983): Cotton Singlets, White With Blue Welting
[TXD 10: Hosiery]



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IS : 3555 - 1983
(Reaffirmed 1994)

Indian Standard
SPECIFICATION FOR COTTON
SINGLET, WHITE WITH BLUE WELTING
(*First Revision*)

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June 1983

**AMENDMENT NO. 1 SEPTEMBER 1998
TO
IS 3555 : 1983 SPECIFICATION FOR COTTON
SINGLET, WHITE WITH BLUE WELTING**

(First Revision)

(*Page 5, clause 4.2*) — Delete the word 'Scouring Loss' appearing in the clause and substitute 'IS 9469 : 1991*' for 'IS : 9469 - 1980*'.
*

(*Page 5, foot-note with '**' mark*) — Substitute the existing with the following:

'*Textiles — Fabric, cotton, plain knitted — Specification (*first revision*).'

(*Page 6, Table 2, col 10*) — Delete the requirement of Mass of 10 Singlets.

(*Page 8, clause 7.4*) — Under 'Characteristic(s)' delete the words 'scouring loss'.

(*Page 9, clause A-3*) — Delete.

(TX 10)

Indian Standard

**SPECIFICATION FOR COTTON
SINGLET, WHITE WITH BLUE WELTING**

(First Revision)

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(Continued on page 2)

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IS : 3555 - 1983

(Continued from page 1)

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Indian Standard

SPECIFICATION FOR COTTON SINGLETS, WHITE WITH BLUE WELTING

(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 8 March 1983, after the draft finalized by the Hosiery Sectional Committee had been approved by the Textile Division Council.

0.2 This standard has been revised to make it up to date by specifying the conformity of plain knitted fabric, used in the manufacture of singlets to IS : 9469-1980* besides effecting other necessary modifications.

0.3 The standards of Weights and Measures Act, 1976 stipulate the use of International System of Units in the country. In order to familiarize the industry with this system the recommended SI units for use in the textile industry are given in Appendix B.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes constructional details and other requirements of cotton singlets, white with blue welting around the neck and armholes.

1.2 This standard does not specify general appearance, feel, lustre, degree of whiteness and shade of welting of the singlets (*see also 4.3*).

*Specification for plain-knitted cotton fabric.

†Rules for rounding off numerical values (*revised*).

IS : 3555 - 1983

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in IS : 3596-1967* shall apply.

3. MANUFACTURE

3.1 Fabric — The singlets shall be tailored out of well and evenly knitted tubular fabric conforming to IS : 9469-1980†. The welting round the neck and armholes shall be of the same material as that of the body and of navy blue colour of the shade as agreed to between the buyer and the seller.

3.1.1 The width of the fabric roll from which the singlets are to be tailored shall correspond to the size of the singlets.

3.2 Shape — The shape of the singlets shall generally be as shown in Fig. 1.

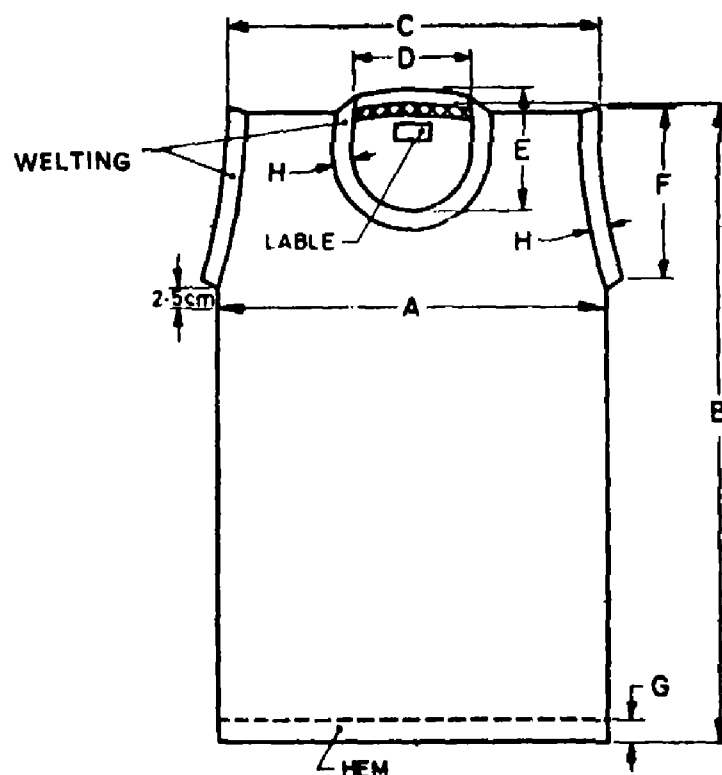


FIG. 1 SINGLET

3.3 Seams and Stitches — The type of stitch and count of sewing thread for stitching various portions of singlets shall be as given in Table 1.

*Glossary of terms relating to hosiery.

†Specification for plain-knitted cotton fabric.

TABLE 1 SEAMS AND STITCHES

(Clause 3.3)

PORTION TO BE STITCHED	TYPE OF STITCH	THREAD* IN THE NEEDLE	THREAD* IN THE LOOPER(S)
(1)	(2)	(3)	(4)
Hemming at the bottom	2-thread overlock	One strand of 9·8 tex × 3 (cotton count 60s/3)	One strand of 15 tex × 2 (cotton count 40s/2)
Shoulder pieces, neck and arm- holes	3-thread overlock	One strand of 9·8 tex × 3 (cotton count 60s/3)	Two strands of 15 tex × 2 (cotton count 40s/2)

*Cotton sewing threads shall conform to IS : 1720-1978 ' Specification for cotton sewing threads (second revision) .

3.4 Freedom from Defects — The singlets shall be reasonably free from manufacturing defects, such as mends, ladders, dropped stitches, holes, cuts, missed stitches and defective stitching and hemming. The singlet shall also be free from chemical damages like defective bleaching welting shall be free from streaks, stains and uneven dying. The stitching shall be such that the face of the fabric at the seam does not show any wrinkles.

4. REQUIREMENTS

4.1 Dimensions and Mass — The dimensions and mass of the singlets of a particular size shall conform to the requirements of Table 2 read with Fig. 1.

NOTE — Size of the singlets is denoted by a number which is the numerical value of chest girth in centimetres.

4.2 Other Requirements — The singlets shall satisfy the requirements in respect of dimensional change due to relaxation, scouring loss, pH value of aqueous extract and colour fastness as given in IS : 9469-1980*.

4.3 Sealed Sample — If in order to illustrate or specify the undeterminable characteristics, such as general appearance, degree of whiteness and shade of welting, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

4.3.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

*Specification for plain-knitted cotton fabric.

TABLE 2 DIMENSIONS AND MASS OF SINGLETS

(Clause 4.1 and Fig. 1)

SIZE	WIDTH ACROSS CHEST A	LENGTH B	WIDTH ACROSS SHOULDERS C	NECK OPENING		ARM HOLE LENGTH F	HEM AT BOTTOM G	WIDTH OF WELTING H	MASS OF 10 SINGLES M ₁₀
				Width D	Depth E				
(1)	(2) cm	(3) cm	(4) cm	(5) cm	(6) cm	(7) cm	(8) cm	(9) cm	(10) kg
80	40.0	70.0	38.0	13.0	13.0	18.0	2.5	2.5	0.910
85	42.5	72.0	40.0	13.5	13.5	19.0	2.5	2.5	1.050
90	45.0	75.0	43.0	14.0	14.0	20.0	2.5	2.5	1.190
95	47.5	78.0	46.0	14.5	14.5	21.0	2.5	2.5	1.330
100	50.0	80.0	48.0	15.0	15.0	22.0	2.5	2.5	1.470
Tolerance	± 1.0	± 2.0	± 1.5	± 1.0	± 1.0	± 1.0	± 0.2	± 0.2	—
Method of Test	A-2	A-2	A-2	A-2	A-2	A-2	A-2	A-2	A-3

5. MARKING

5.1 A suitable cloth label shall be securely stitched to each singlet at the inside of the neck portion (backside) on which the following shall be indicated:

- a) Size;
- b) Manufacturer's name, initials or trade-mark, if any; and
- c) Any other information required by the buyer.

5.1.1 The product may also be marked with Standard mark.

5.1.1.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

6. PACKING

6.1 The singlets shall be packed in accordance with IS : 3086-1965* or IS : 3325-1965†, as the case may be.

7. SAMPLING

7.1 **Lot** — In any consignment, all the singlets of the same size manufactured from the same quality of fabric shall constitute a lot.

7.2 The conformity of a lot to the specification shall be determined on the basis of the test carried out on the singlets selected from the lot.

7.3 Unless otherwise agreed to between the buyer and the seller, a number of singlets, depending on the lot size, shall be selected at random according to col 1 and 2 of Table 3.

*Code for seaworthy packaging of cotton hosiery yarn and goods.

†Code for inland packaging of cotton hosiery yarn and goods.

TABLE 3 SAMPLE SIZE AND PERMISSIBLE NUMBER OF NON-CONFORMING SINGLETS(*Clauses 7.3*)

No. of SINGLETS IN THE LOT	FOR DIMENSIONS AND VISUAL INSPECTION		NUMBER OF SINGLETS TO BE TESTED FOR CHEMICAL CHARACTERISTICS
	Number of Singlets to be Inspected	Permissible Number of Non-Conforming Pairs	
(1)	(2)	(3)	(4)
Up to 100	10	0	3
101 „ 300	20	1	3
301 „ 500	30	2	5
501 „ 1 000	50	3	5
1 001 and above	80	5	8

7.4 The number of singlets to be inspected and criterion for conformity for each characteristic shall be as follows:

<i>Characteristic(s)</i>	<i>No. of Singlets to be Inspected</i>	<i>Criterion for Conformity</i>
Visual inspection and Dimensions	According to col 2 of Table 3	Non-conforming singlets shall not exceed the corresponding number given in col 3 of Table 3
Mass	Sets of 10 singlets obtained from those selected according to col 2 of Table 3	All the observations shall satisfy the relevant requirement
Dimensional change, scouring loss, pH value and colour fastness	According to col 4 of Table 3	All the test results shall satisfy the relevant requirement

APPENDIX A(*Table 2*)**METHODS OF TEST****A-1. CONDITIONING OF TEST SPECIMENS AND ATMOSPHERIC CONDITIONS FOR TESTING**

A-1.1 The test specimens shall be conditioned and tested in the standard atmosphere as given in IS : 6359-1971*.

A-2. DIMENSIONS

A-2.1 Take a singlet from the test sample. Lay it flat on a horizontal surface. Remove all creases and wrinkles without distorting it. Measure, correct to the nearest 5 mm, the dimensions given in Table 1.

A-3. MASS

A-3.1 Take a set of 10 singlets from the test sample. Condition to moisture equilibrium for 24 hours (*see A-1.1*) and weigh to an accuracy of 10 g.

APPENDIX B(*Clause 0.3*)**RECOMMENDED SI UNITS FOR TEXTILES**

SL No.	CHARACTER- ISTIC	SI UNIT		APPLICATION
		Unit	Abbrevia- tion	
(1)	(2)	(3)	(4)	(5)
1.	Length	Millimetre	mm	Fibres
		Millimetre, centimetre	mm, cm	Samples, test specimens (as appropriate)
		Metre	m	Yarns, ropes, cordage, fabrics
2.	Width	Millimetre	mm	Narrow fabrics
		Centimetre	cm	Other fabrics
		Millimetre, centimetre	mm, cm	Samples, test specimens (as appropriate)
		Centimetre, metre	cm, m	Carpets, druggets, <i>DURRIES</i> (as appropriate)

*Method for conditioning of textiles.

IS : 3555 - 1983

SL No.	CHARACTER- ISTIC	SI UNIT		APPLICATION
		Unit	Abbrevia- tion	
(1)	(2)	(3)	(4)	(5)
3.	Thickness	Micrometre (micron) Millimetre	μm mm	Delicate fabrics Other fabrics, car- pets, felts
4.	Linear den- sity	Tex Millitex Decitex Kilotex	tex mtex dtex ktex	Yarns Fibres Filaments, filament yarns Slivers, ropes, cor- dage
5.	Diameter	Micrometre (micron) Millimetre	μm mm	Fibres Yarns, ropes, cor- dage
6.	Circumfer- ence	Millimetre	mm	Ropes, cordage
7.	Threads in fabric:			Woven fabrics (as appropriate)
	a) Length- wise	Number per centimetre Number per decimetre	ends/cm ends/dm	
	b) Width- wise	Number per centimetre Number per decimetre	picks/cm picks/dm	
8.	Warp threads in loom	Number per centimetre	ends/cm	Reeds
9.	Stitches in knitted fabric:			Knitted fabrics (as appropriate)
	a) Length- wise	Courses per centimetre Courses per decimetre	courses/cm courses /dm	
	b) Width- wise	Wales per centimetre Wales per decimetre	wales/cm wales/dm	
10.	Stitch length	Milli metre	mm	Knitted fabrics, made-up fabrics
11.	Mass per unit area	Grams per square metre	g/m^2	Fabrics
12.	Mass per unit length	Grams per metre	g/m	Fabrics
13.	Twist	Turns per centimetre Turns per metre	turns/cm turns/m } }	Yarns, ropes, cor- dage (as appro- priate)

Sl. No.	CHARACTER- ISTIC	SI UNIT		APPLICATION
		Unit	Abbrevia- tion	
(1)	(2)	(3)	(4)	(5)
14.	Test or gauge length	Millimetre, centimetre	mm, cm	Fibre, yarn and fabric specimens (as appropriate)
15.	Breaking load	Millinewton	mN	Fibre, delicate yarns (individual or skeins)
		Newton	N	Strong yarns (individual or skeins), ropes, cordage, fabrics
16.	Breaking length	Kilometre	km	Yarns
17.	Tenacity	Millinewton per tex	mN/tex	Fibres, yarns (individual or skeins)
18.	Twist factor or twist multiplier	Turns per centimetre \times square root of tex Turns per metre \times square root of tex	turns/cm $\times \sqrt{\text{tex}}$ turns/m $\times \sqrt{\text{tex}}$	Yarns (as appropriate)
19.	Bursting strength	Newton per square centimetre	N/cm ²	
20.	Tear strength	Millinewton, newton	mN, N	Fabrics (as appropriate)
21.	Pile height	Millimetre	mm	Carpets
22.	Pile density	Mass of pile yarn in grams per square metre per millimetre pile height	g/m ² /mm pile height	Pile carpets
23.	Elastic modulus	Millinewton per tex per unit deformation	mN/tex/unit deformation	Fibres, yarns, strands

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